REMARKS

At the outset, Applicant thanks the Examiner for the thorough review and consideration of the subject application and for the courtesies extended to the Applicants' representative in a personal interview conducted on February 19, 2004. The Final Office Action of November 26, 2003 has been received and its contents carefully reviewed.

By this amendment, Applicant hereby amends the specification and claims 1-3, 8-11, and 13, adds new claims 17 and 18, and respectfully that submits no new matter has been entered. Applicant respectfully submits that the amendments to the claims are based upon the amendments discussed in the interview on February 19, 2004 to overcome the standing rejection under 35 U.S.C. § 112, first paragraph. Moreover, the amendments to the specification are merely cosmetic, to correspond to the language of the claims, and do not alter the scope of the invention. Accordingly, Applicant submits that the specification and claims now define the present invention more clearly.

In the Office Action dated November 26, 2003, the Examiner objected to the drawings under 37 CFR § 1.83(a) as failing to show every feature of the invention specified in the claims; objected to the disclosure of the invention as being so incomprehensible as to preclude a reasonable search of the prior art by the Examiner; rejected claims 1-3 and 8-16 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement; and rejected claims 1-3 and 8-16 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claims the subject matter which Applicant regards as the invention. These objections and rejections are traversed and reconsideration of the drawings, specification, and claims is respectfully requested in view of the following remarks.

Preliminarily, Applicant notes that the Office Action Summary and page 9 of the outstanding Office Action set forth a shortened statutory period for reply to expire three months from the mailing date of the present Office Action (November 26, 2003). However, at page 2 of the Office Action, the Examiner stated the shortened statutory period for reply to the outstanding Office Action is set to expire one month, or thirty days, whichever is longer, from the mailing date of the outstanding Office Action.

According to M.P.E.P. § 710.02(b), the Commissioner has directed the Examiner to set a shortened period for reply to every action. The length of the shortened statutory period to be used depends on the type of reply required. A shortened statutory period of one month (not less than thirty days) is set for replies to a requirement for restriction or election of species or when a reply by an Applicant for a nonfinal Office Action is *bona fide* but includes an inadvertent omission. A shortened statutory period should be set for three months for replies to any Office Action on the merits.

Applicant respectfully submits the Office Action dated November 26, 2003 did not include a requirement for restriction or election of species. Moreover, Applicant has not submitted a *bona fide* reply to a nonfinal Office Action including an inadvertent omission prior to the present Reply under 37 CFR § 1.111. Further, and for reasons discussed below, Applicant respectfully submits the disclosure of the specification is not so incomprehensible as to preclude a reasonable search of the prior art by the Examiner. It is respectfully submitted that the present Request for Reconsideration is fully responsive to the Office Action dated November 26, 2003, i.e., an Office Action on the merits including objections to the specification and drawings and rejections to the claims.

Accordingly, Applicant respectfully submits the shortened statutory period for reply expires on February 26, 2004, three months from the mailing of the outstanding Office Action of November 26, 2003.

The objection to the drawings under 37 CFR § 1.83(a) is respectfully traversed and reconsideration is requested.

In objecting to the drawings under 37 CFR § 1.83(a), the Examiner notes that the specification, at page 7, lines 13 and 14, states "the first active layer is 'not shown'," and asserts that "the first and second active layers" and "the light volume or light transmission adjusting layer controlled by the second gate line" must be shown or the features(s) canceled from the claims(s).

As correctly pointed out by the Examiner, 37 CFR § 1.83(a) requires that the drawings show every feature of the invention specified in the claims. However, 37 CFR §

1.83(a) also states that conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawings in the form of a graphical drawing symbol.

Regarding the "first active layer" cited by the Examiner, the specification states at page 8, lines 4 and 5 that "a first active layer, which is a channel layer of the TFT (not shown) is formed on the gate insulating film 52..." Further, at page 2, lines 11 and 12, the specification states "A designer must select between an amorphous-silicon TFT (a-Si:H TFT) and a Polycrystalline silicon TFT..." Still further, the related art illustrated in Figure 2 illustrates TFTs arranged proximate crossings of the gate lines and data lines. Therefore, and in accordance with the requirements of 37 CFR § 1.83(a), Applicant respectfully submits that the "first active layer," described above as the channel layer of the TFT (which is also not shown) is a conventional feature disclosed in the specification and drawings that is not essential for a proper understanding of the present invention.

With respect to the Examiner's objection to the drawing for failing to show a "light volume or light transmission adjusting layer controlled by the second gate line," Applicant submits that such a feature has been canceled from the claims.

In the "Response to Arguments" section of the present Office Action, the Examiner states "Applicant's alleged novelty is the connection between the active layer and the second gate line."

Preliminarily, Applicant respectfully submits that Applicant has made no such allegation as asserted by the Examiner above. To reiterate, claim 1 recites, among other elements, "a light transmission restricting layer formed beneath the pixel electrodes," claim 8 recites, among other elements, "a light transmission restricting layer beneath the plurality of pixel electrodes, wherein the plurality of pixel electrodes are controlled by a second scanning line (G1) among the scanning lines (GØ - Gn)," and claim 13 recites, among other elements, "wherein the light transmission restricting layer is formed beneath the plurality of pixel electrodes."

In light of the arguments made above, Applicant respectfully requests withdrawal of the objection to the drawings under 37 CFR § 1.83(a).

The objection to the disclosure as being so incomprehensible as to preclude a reasonable search of the prior art is respectfully traversed and reconsideration is requested.

In objecting to the disclosure as being so incomprehensible as to preclude a reasonable search of the prior art, the Examiner stated "the following items are not understood: (1) what the function of the light volume adjusting layer is in the LCD; (2) how the light volume adjusting layer operates to adjust the light; (3) what source of light is being adjusted; and (4) how the second gate line is connected to and operates the light volume adjusting layer to perform its function."

In objecting to the disclosure as being incomprehensible, it appears as though the Examiner employed the use of form paragraph 7.02 *Disclosure Is Incomprehensible*, found in M.P.E.P. § 702.01, describing procedure to be followed with respect to obviously informal cases. Applicant respectfully submits, however, that the present application is not an obviously informal application. Moreover, Applicant respectfully submits the terms, phrases, and modes of characterization used to describe the present invention are sufficiently consonant with the art to which the invention pertains, and with which it is most nearly connected, to enable the Examiner to make a reasonable search.

In the "Response to Arguments" section of the present Office Action, the Examiner attempts to present evidence revealing that a textual search of a multitude of databases including parameters such as "light adj volume adj adjusting adj layer," "light adj volume adj adjusting adj film," "light adj transmission adj adjusting adj (film layer)," "light adj transmit$5 adj adjusting adj (film layer)," "light adj2 adjusting adj (film layer)," and "(light adj2 adjusting adj (film layer))," "(LCD or (liquid adj crystal adj display))," and the like, (the results of which are discussed below) indicates that Applicant is not using "art-recognized vernacular of the LCD art."

Preliminarily, it is respectfully submitted that Applicant may be their own lexicographer. See M.P.E.P. § 2111.01. Further, any special meaning assigned to a term or

phrase must be sufficiently clear in the specification so that any departure from common usage would be so understood by a person of experience in the field of the invention. See also M.P.E.P. § 2173.05(a), stating that it is not only permissible, but often desirable, to use new terms (or phrases) that are frequently more precise in describing and defining the new invention. Applicant respectfully submits that while it may be difficult to compare the claimed invention with the prior art when new phrases are used that do not appear in the prior art, this does not make the new phrases incomprehensible or indefinite.

For example, Applicant respectfully submits that one of ordinary skill in the art of optics would readily understand that the term "photon transmitting solid" would be reasonably understood to refer to any transparent solid (e.g., optical glass, certain plastics, etc.) even though a textual search in the USPAT database may reveal zero "hits". Similarly, while the meaning of the terms "light volume adjusting layer" recited in claim 1 or "light transmission restricting layer" recited in claims 8 and 13 (or variants thereof searched by the Examiner), by themselves, may not be as inherently understood as "photon transmitting solid," the present specification states, at page 7, lines 14-17, that "[i]n the liquid crystal display described with respect to FIG. 4, an active layer... on a lower layer of pixels controlled by the number one scanning line or gate line (G1) (see FIG. 2) serves to restrict a transmission of light to pixel electrodes." At page 8, lines 5-7, the present specification teaches that "a second active layer 53 is formed on the gate insulating film corresponding to a portion where the pixel electrodes [57] are formed." Further, at page 9, lines 20 and 21 the present specification states "[w]hen the pixel electrode... is formed, the active layer is formed on a lower layer of the pixel electrode to restrict the transmission of light..." Accordingly, Applicant respectfully submits that the special meaning attached to the terms "a light volume adjusting layer" and "light transmission restricting layer" is sufficiently clear in the present specification so that a person of experience in the field of the invention would understand the scope of the claimed invention.

The Examiner asserted that a textual search of the phrases "light volume adjusting layer" and "light volume adjusting film" yielded no significant "hits" other than the present application. The Examiner then concluded that the terms, phrases, and modes of characterization used to the describe the present invention are not sufficiently consonant with

the art to which the invention pertains because, if the terms were sufficiently consonant, other hits would have resulted from the search phrase.

Firstly, it is respectfully submitted that consonance requires the quality or condition of agreement or harmony, while identity requires the quality or condition of being the same as something else. Applicant respectfully submits that the individual words used to define the new terms of the present invention are commonly used within the LCD art and have been put together in such a manner as to be accurately identified within specification and drawings by one of ordinary skill in the art (see arguments made above at least with respect to the objection to the drawings). Accordingly, the apparent fact that no "hits" had terms identical to those searched (i.e., "hits" with terms lacking identity with respect to the terms of the present invention), is not necessarily evidence of the absence of "hits" with terms lacking consonance with respect to the terms of the present invention.

Secondly, the Examiner's argument preceding the paragraph above can only be accepted as valid if one presumes that a textual search using the phrases "light volume adjusting layer" and "light volume adjusting film" (or any of the other phrases cited by the Examiner) constitutes a reasonable search. According to M.P.E.P. § 904.02, "[a]utomated search tools covering patent documents usually provide both a classified and text search capability. Text search can be powerful, especially where the art includes well-established terminology and the search need can be expressed with reasonable accuracy in textual terms. However, it is rare that a text search alone will constitute a thorough search patent documents. Some combination of text search with other criteria, in particular classification, would be a normal expectation in most technologies."

In view of the Examiner's apparently exclusive reliance on textual searches of phrases, and in view of the fact that the phrases used in the present claims are sufficiently identified in the specification so that a person of experience in the field of the invention would understand the scope of the claimed invention, Applicant respectfully submits the Examiner has failed to establish that a minimally thorough (i.e., reasonable) search was even performed.

Similar arguments made above with respect to the Examiner's conclusion based on textual searches of the phrases "light volume adjusting layer" and "light volume adjusting film" are equally applicable to the Examiner's findings based on textual searches of the phrases "light transmission adjusting layer," "light transmit$5 adjusting layer," and "light X adjusting layer" and "light X adjust film" (where "X" is any word and where at least one of "liquid crystal display" or "LCD" is also listed in the publication).

The Examiner asserted that a search of all publications assigned to "LG Phillips LCD" yielded 67 hits. The Examiner then concluded that "even LG Phillips LCD does not use the terminology of the instant application... [begging] the question as to why LG Phillips LCD would avoid the use of the terminology 'light volume adjusting layer' in the 66 other publications, if... the terms, phrases, and modes of characterization used to describe the present invention are sufficiently consonant with the art to which the invention pertains."

Firstly, Applicant respectfully submits the search parameter "(LG adj Phillips).asn." used by the Examiner to support the argument made above misspells the assignee of the present invention. The search parameter used should have been "(LG adj **Philips**).asn." **(emphasis added)**.

Secondly, assuming *arguendo* the fact that no other publication by the present assignee uses the terminology 'light volume adjusting layer' can beg question as to why the present assignee avoids use of terminology consonant with the art, Applicant respectfully submits such a question cannot be "begged" reasonably. For example, it could be that no other application by the present assignee has yet been published that is directed the invention as presently claimed and set forth in the present application.

Further, the Examiner stated that a search of the phrases "light X adjusting layer" or "light X adjusting film" (where "X" is any word and where at least one of "liquid crystal display" or "LCD" is also listed in the publication) resulted in a "hit" in Korean Publication number KR 2002058605, assigned to the present assignee. The Examiner alleged that Korean Publication number KR 2002058605 "appears to be identical to the instant invention" and stated that the Korean Publication was not provided in an IDS.

Even if Korean Publication number KR 2002058605 is "identical to the instant invention," as asserted by the Examiner, Applicant respectfully submits that the Publication does not constitute prior art as it has an effective reference date (i.e., a publication date) of July 12, 2002. The present application, however, has a filing date of June 27, 2001, thereby antedating the Korean Publication number KR 2002058605.

In summary, Applicant respectfully submit that the Examiner's conclusion of incomprehensibility in a disclosure (e.g., that a disclosure is "not using art-recognized vernacular of the LCD art) based on an apparent lack of significant "hits" resultant from exclusive reliance on textual searching, without more, is unsupported. As discussed above, the terms of the present invention are set forth with sufficient clarity in the present specification so that a person of experience in the field of the invention would understand the scope of the claimed invention. Assuming *arguendo* that the textual search described by the Examiner was reasonable, Applicant respectfully submits that an apparent lack of significant "hits," coupled with sufficiently clear support of terms in the disclosure, is more indicative of an invention being allowable than an invention being incomprehensible.

In response to the Examiner's original basis for objecting to the disclosure as being so incomprehensible as to preclude a reasonable search of the prior art (i.e., because the Examiner does not understand "(1) what the function of the light volume adjusting layer is in the LCD; (2) how the light volume adjusting layer operates to adjust the light; (3) what source of light is being adjusted; and (4) how the second gate line is connected to and operates the light volume adjusting layer to perform its function"), Applicant respectfully submits the following.

With respect to the first item not "understood" by the Examiner (i.e., what the function of the light volume adjusting layer is in the LCD), Applicant respectfully submits that 35 U.S.C. § 112, first paragraph, requires, among other things, that the specification contain a written description of the invention and the manner and process or making and using it (the written description requirement) as to enable any person skilled in the art, or with which it pertains or is most nearly connected, to make and use the invention (the enablement requirement). See M.P.E.P. § 2161.

Applicant respectfully submits that, upon reviewing the application as a whole (specification, claims, and drawings), one of ordinary skill in the art would readily recognize the function of the "light volume adjusting layer" (see, for example, the arguments and citations of the present specification made above for illustrative examples of the function of the light volume adjusting layer).

With respect to the second item not "understood" by the Examiner (i.e., how the light volume adjusting layer operates to adjust the light), Applicant respectfully refers the Examiner to page 6, lines 10-17, page 7, lines 14-17, page 8, lines 12-15, and page 9, lines 18-23 for an exemplary discussion on "how the light volume adjusting layer operates to adjust the light."

With respect to the third item not "understood" by the Examiner (i.e., what source of light is being adjusted), Applicant respectfully submits that the present application does not require that any "source of light" be adjusted and requests the Examiner to identify where the present application discloses or claims that a "source of light" is adjusted.

Similarly, with respect to the fourth item not "understood" by the Examiner (i.e., how the second gate line is connected to and operates the light volume adjusting layer to perform its function), Applicant respectfully submits that the present application does not require the any "second gate line... [to be] connected to and... [operate] the light volume adjusting layer to perform its function" and requests the Examiner to identify where the present application discloses or claims such a feature.

The rejection of claims 1-3 and 8-16 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, is respectfully traversed and reconsideration is requested.

In rejecting claims 1-3 and 8-16 under 35 U.S.C. § 112, first paragraph, the Examiner stated the specification does not "...enable one of ordinary skill (1) what the function of the light volume adjusting layer is in the LCD; (2) how the light volume adjusting layer operates

to adjust the light; (3) what source of light is being adjusted; and (4) how the second gate line is connected to and operates the light volume adjusting layer to perform its function."

The present rejection of the claims under 35 U.S.C. § 112, first paragraph, is founded on the same basis as the aforementioned objection to the disclosure as being so incomprehensible so as to preclude a reasonable search from being performed. Accordingly, similar arguments made above with respect to the aforementioned objection to the disclosure due to first through fourth items not understood by the Examiner are equally applicable to the present rejection.

The rejection of claims 1-3 and 8-16 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which application regards as the invention is respectfully traversed and reconsideration is requested in view of the amendments to the claims above and in view of the following remarks.

In rejecting claims 1 and 13, the Examiner states claims 1 and 13, as presently written, "make it unclear whether it is the light volume adjusting (light transmission restricting) layer or the pixel electrode that is controlled by the second gate (scanning) line.

In rejecting claim 8, the Examiner states claim 8, as presently written, "makes it unclear whether it is the substrate or the light transmission restriction layer that is controlled by the second scanning line."

According to M.P.E.P. § 2173.02, the test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." While Applicant respectfully disagrees that it is unclear as to whether it is the light transmission restricting layer or whether it is the pixel electrode (or substrate) that is controlled by the second gate (or scanning line), Applicant hereby amends the claims to more clearly define the present invention and expedite prosecution of the application.

In light of the fact that amended claim 1 recites "a light transmission restricting layer formed beneath the pixel electrodes;" that amended claim 8 recites "a light transmission restricting layer formed beneath the plurality of pixel electrodes, wherein the plurality of

pixel electrodes are controlled by a second scanning line (G1) among the scanning lines (GØ - Gn);" and that amended claim 13 recites "wherein the light transmission restricting layer is formed beneath the plurality of pixel electrodes," and in view of at least the aforementioned citations to the specification, Applicant respectfully submits one of ordinary skill in the art would readily understand that the pixel electrodes are controlled by the scanning line.

Further, in light of the Examiner's remarks in the "Response to Arguments" section of the present Office Action, it appears as though the present rejection of the claims under 35 U.S.C. § 112, second paragraph, is additionally founded on the same basis as the aforementioned objection to the disclosure as being so incomprehensible so as to preclude a reasonable search from being performed. Accordingly, similar arguments made above with respect to the aforementioned objection to the disclosure due to first through fourth items not understood by the Examiner are equally applicable to the present rejection.

Assuming arguendo, that claims 1-3 and 8-16 are properly rejected under 35 U.S.C. § 112, first and second paragraph, Applicant respectfully submits the invention defined in claims 1-3 and 8-16 must still be considered in view of any pertinent prior art. According to M.P.E.P. § 2143.03, indefinite limitations as well as limitations unsupported in the original specification cannot be disregarded. All limitations of the claims must be considered and given weight even when limitations are unsupported by the original specification and when claims are subject to more than one interpretation. Claims should be rejected over the prior art based on whatever interpretations of the claim that renders the prior art applicable.

In the "Response to Arguments" section of the present Office Action, the Examiner asserts that "no pertinent prior art can be found" because the term "light volume adjusting layer" in LCDs cannot be found, indicating that the disclosure is allegedly incomprehensible and fails to meet the requirements of 35 U.S.C. § 112, first and second paragraphs.

Assuming *arguendo* that Applicant's arguments made above with respect to the objection of the drawings, objection of the disclosure, and rejections of the claims, are ultimately found unpersuasive, because: (1) Applicant may not be their own lexicographer where the meaning of the terms used in the claims is clearly supported by the specification and in light of what one of ordinary skill in the art would understand; (2) an apparently

exclusive reliance on textual searches including search parameters such as "light volume adjusting layer" that fail to retrieve many significant hits constitutes a reasonable search; and (3) the mere presence of questions regarding aspects of the invention that are not essential to a proper understanding of the invention or that are answered in the specification, in light of what one of ordinary skill in the art would understand, allegedly establishes a *prima facie* case of failing to meet the written description requirement, Applicant respectfully submits that the Examiner has failed to demonstrate wherein the disclosure is "incomprehensible" and does not meet the requirements of 35 U.S.C. § 112, first and second paragraphs at least with respect to claims 8-16. For example, claims 8 and 13 do not include a "light volume adjusting layer". Rather, claims 8 and 13 include a "light transmission restricting layer." Accordingly, Applicant respectfully submits that the Examiner's assertions regarding the incomprehensibility and § 112, failures of the specification and claims are unfounded at least with respect to claims 8-16, delineating the metes and bounds present invention using terms such as "light transmission restricting layer."

If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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